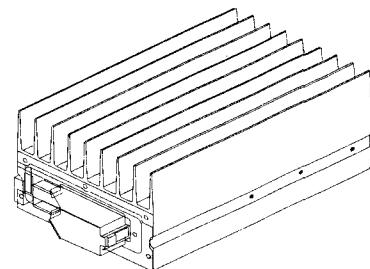


# Service Service Service



# Service Manual

12 V 

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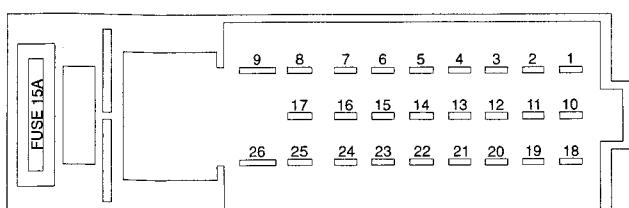
**PHILIPS**

## TECHNICAL DATA

Power supply:	9,0 V - 16,0 V 11,0 V - 15,0 V (full Spec.)
Quiescent current:	< 0,5 mA (amplifier off) < 1,0 A (amplifier on)
Power consumption max.:	15 A
Load impedance:	Bass: 8 Ω Front / Rear: 8 Ω
Line in voltage:	< 10,0 V <sub>eff</sub>
Line in impedance:	< 470 Ω
Line out voltage:	Bass: < 17 V <sub>eff</sub> Front / Rear: < 14V <sub>eff</sub>
Power output (sinus):	Bass: 19 W (f = 1 KHz, 1% harm.dist.) Front / Rear: 23 W (f = 40 Hz, 1% harm.dist.)
Signal / Noise:	> 70 dB
Crosstalk:	< 40 dB (at 2 KHz)

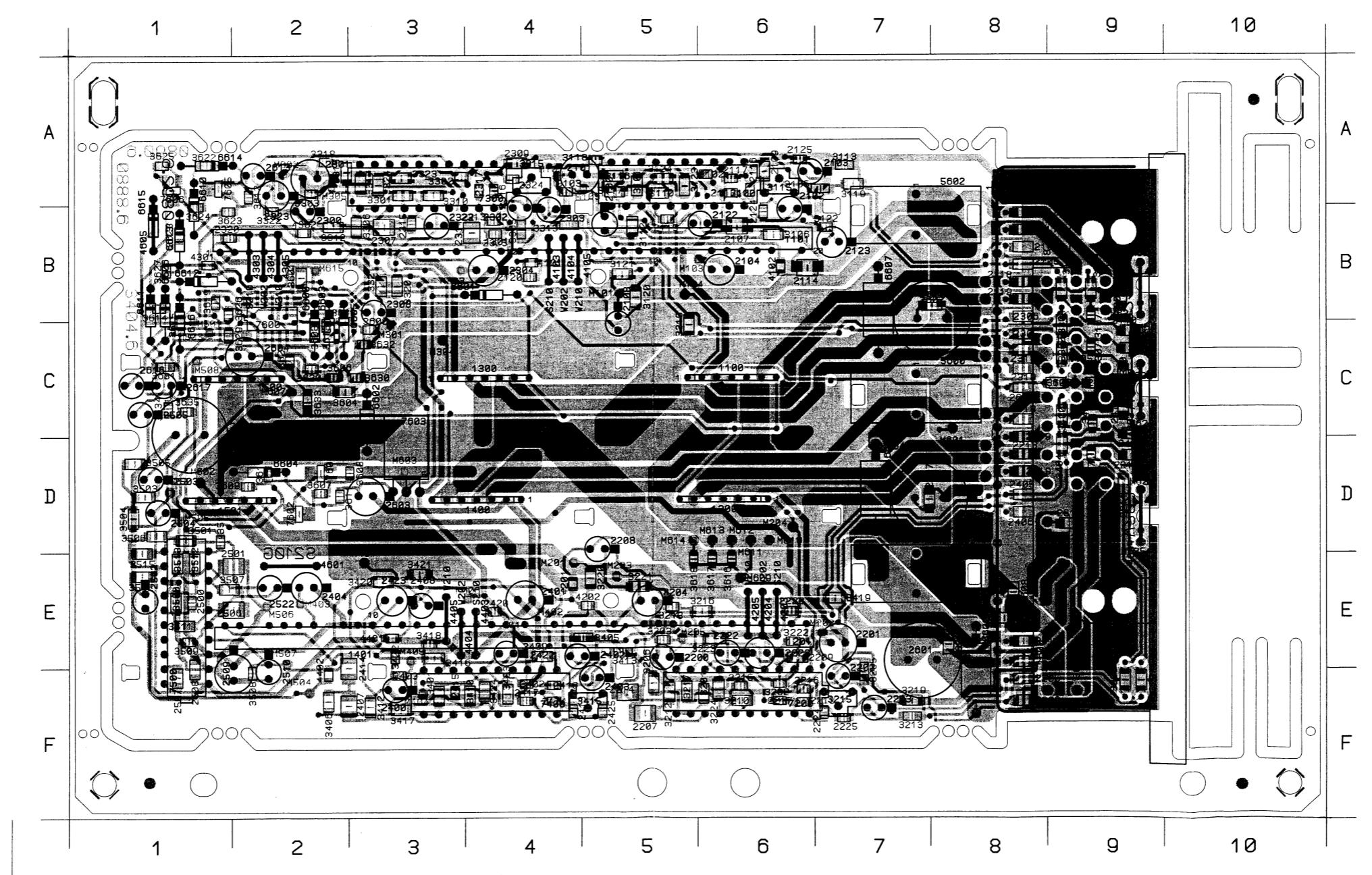
## CHECKS (Supply voltage 14,0 V)

VREF	M103, M203, M303, M403	6,5 V
13V5 / +2a	M606	13,0 V
14V4 / +1a	M602	14,0 V
14V4 / +1b	M603	14,0 V
14V4 / +1c	M604	14,0 V
14V4 / +1	M601	14,0 V
V-REF / 5V6	M615	5,6 V
U-ST / 13V5	M607	9,2 V
+REM / 14V4	M605	9 V < + REM < 9,5 V => Low voltage off
+REM / 14V4	M605	16 V < + REM < 16,5 V => High voltage off

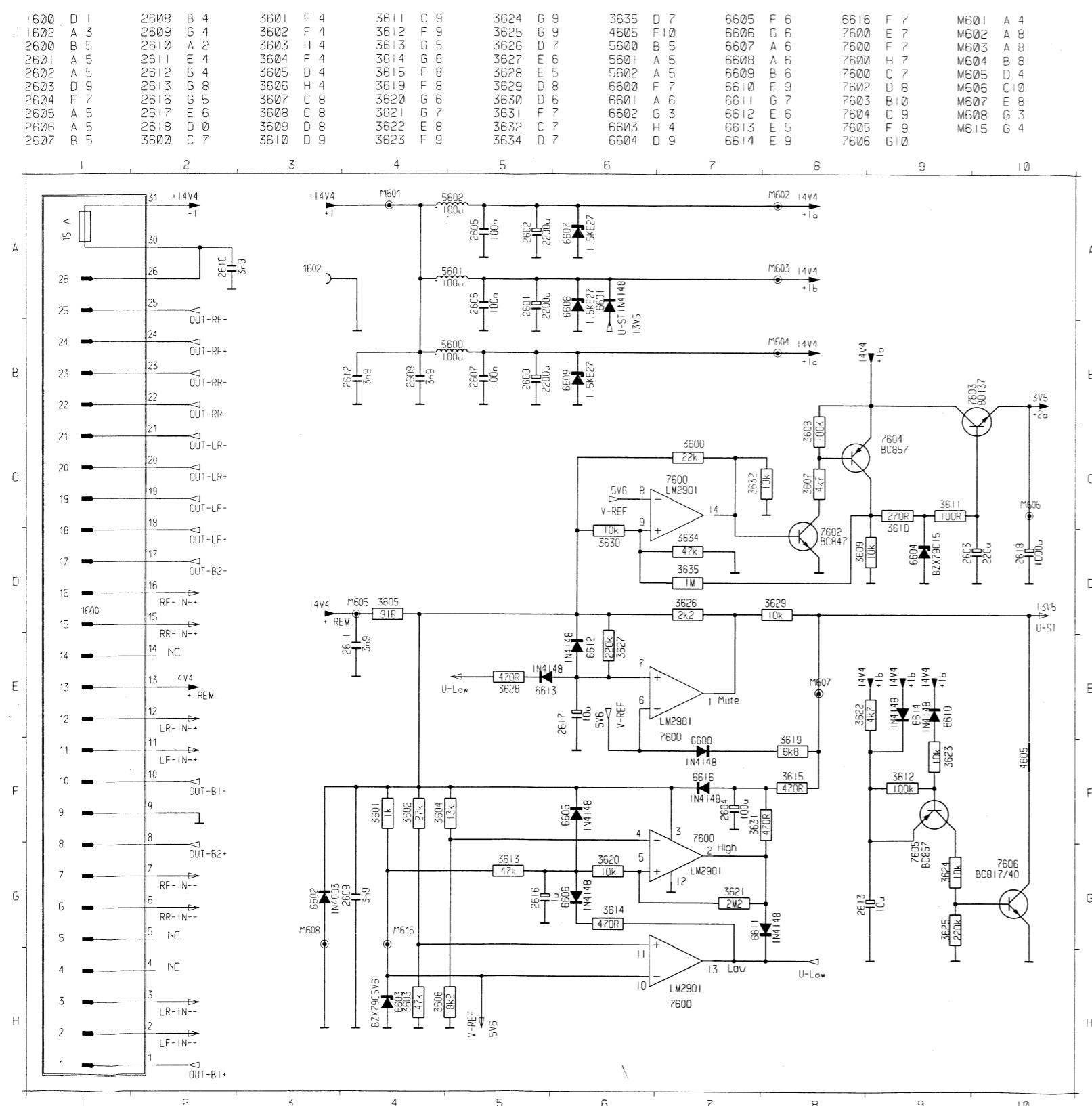


1: BASS 1 +	10: BASS 1 -	19: LF -
2: LINE IN LF -	11: LINE IN LF +	20: LR+
3: LINE IN LR -	12: LINE IN LR +	21: LR -
4: NC	13: REMOTE + (14,4V)	22: RR +
5: NC	14: NC	23: RR -
6: LINE IN RR -	15: LINE IN RR +	24: RF +
7: LINE IN RF -	16: LINE IN RF +	25: RF -
8: BASS 2 +	17: BASS 2 -	26: IGN. KEY (14,4V)
9: GND	18: LF +	

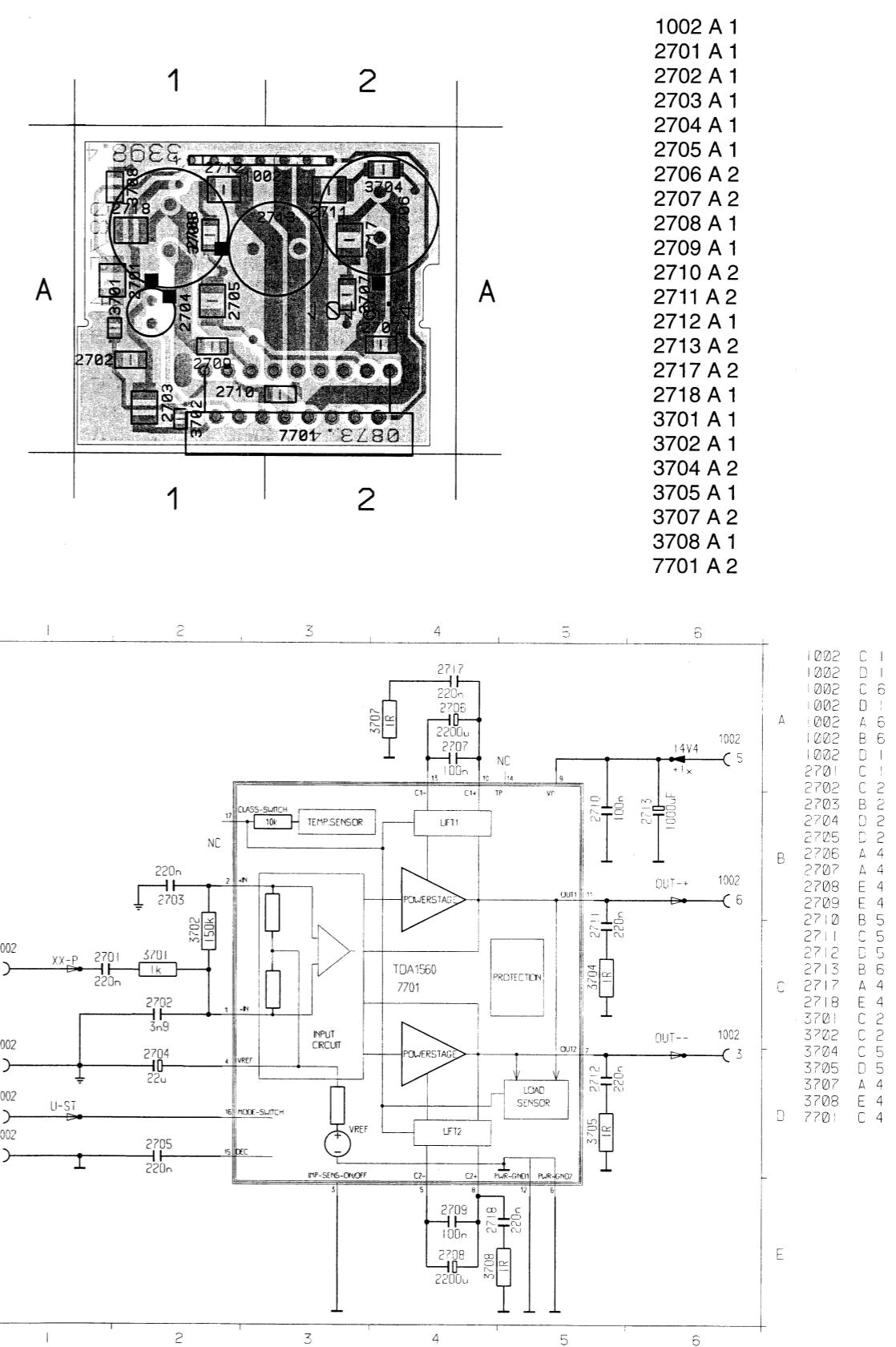
1100 C 6	2110 C 9	2208 D 5	2306 B 8	2404 E 2	2502 E 1	2607 D 7	3116 A 5	3217 F 5	3318 A 2	3419 E 7	3602 B 2	3624 B 1	4301 B 1	6604 D 2	7605 A 1	M501 B 1	M615 B 2
1101 B 5	2111 B 9	2209 E 6	2307 B 3	2405 D 8	2503 D 1	2608 E 8	3117 A 5	3218 E 5	3319 C 5	3420 E 3	3603 C 2	3625 A 1	4302 B 2	6605 C 2	7606 A 1	M502 D 1	M620 B 9
1200 D 6	2113 A 6	2210 D 9	2308 B 3	2406 D 8	2504 D 1	2609 C 8	3118 A 5	3219 F 7	3320 B 3	3421 E 3	3604 C 2	3626 B 1	4303 B 2	6606 B 1	M101 B 5	M503 C 1	M621 B 9
1201 E 5	2114 B 6	2211 D 9	2309 A 4	2407 F 2	2505 C 1	2610 D 9	3119 A 7	3220 E 5	3321 B 3	3422 E 3	3605 C 9	3627 B 1	4304 B 2	6607 B 7	M102 A 4	M504 F 2	M622 C 9
1300 C 4	2115 B 5	2213 F 6	2310 C 9	2408 E 3	2506 E 2	2611 C 9	3120 B 5	3221 E 5	3322 B 2	3423 F 4	3606 C 2	3628 B 1	4305 B 2	6608 F 8	M103 B 6	M505 D 1	M623 C 9
1301 B 3	2116 A 6	2214 F 5	2311 C 9	2409 E 4	2507 F 1	2612 E 8	3121 B 5	3222 E 6	3323 A 3	3424 F 4	3607 D 2	3629 C 1	4401 E 3	6609 D 7	M104 B 5	M506 E 2	M624 D 9
1400 D 4	2117 A 6	2215 F 6	2313 B 4	2410 C 9	2508 E 1	2613 A 2	3122 B 7	3223 E 6	3324 A 3	3500 E 1	3608 D 3	3630 C 3	4402 F 2	6610 B 1	M105 A 5	M507 E 2	M625 D 9
1401 E 3	2118 B 8	2216 F 6	2314 B 4	2411 C 9	2509 F 2	2616 C 1	3123 A 5	3224 F 6	3400 C 9	3501 D 1	3609 D 2	3631 C 1	4403 E 4	6611 B 1	M201 E 4	M508 C 1	
1500 C 2	2119 B 8	2217 F 6	2315 B 3	2413 F 4	2510 F 2	2617 C 1	3124 A 5	3300 C 9	3401 F 3	3502 E 1	3610 D 2	3632 C 3	4404 E 3	6612 B 1	M202 E 7	M601 C 8	
1501 D 1	2120 B 4	2218 D 8	2316 A 4	2414 E 2	2511 B 8	2618 C 1	3200 F 9	3301 A 3	3402 F 4	3503 D 1	3611 D 2	3633 C 2	4405 E 3	6613 B 1	M203 E 5	M602 D 1	
1600 D 9	2122 B 6	2219 D 8	2317 A 4	2415 F 3	2512 B 8	3100 B 9	3201 F 6	3302 A 3	3403 F 3	3504 D 1	3612 A 2	3634 C 1	4601 E 2	6614 A 1	M204 D 6	M603 D 3	
1602 D 8	2123 B 7	2220 E 6	2318 C 8	2416 F 4	2513 E 8	3101 A 5	3202 F 6	3303 A 2	3404 D 9	3505 D 1	3613 C 2	3635 C 1	4602 B 9	6615 B 1	M205 E 5	M604 C 7	
2100 B 5	2124 B 6	2222 E 6	2319 C 8	2417 F 4	2514 E 8	3102 A 6	3203 E 5	3304 C 9	3405 E 5	3506 D 1	3614 B 1	4101 B 4	4603 C 9	6616 C 1	M301 C 3	M605 C 9	
2101 A 4	2125 A 6	2223 E 6	2320 B 1	2418 C 8	2515 D 1	3103 A 4	3204 F 9	3305 B 4	3406 F 2	3507 E 1	3615 C 1	4102 B 6	4604 D 9	7100 A 5	M302 A 2	M606 E 4	
2102 B 6	2200 E 5	2224 F 7	2322 B 3	2419 D 8	2522 E 2	3104 B 9	3205 F 7	3306 B 3	3407 C 9	3508 F 2	3616 E 6	4103 B 4	4605 B 1	7200 F 6	M303 B 3	M607 C 2	
2103 A 6	2201 E 7	2225 F 7	2323 A 2	2420 E 4	2600 D 7	3105 A 7	3206 F 5	3307 C 9	3410 F 4	3509 E 1	3617 E 6	4104 B 4	5600 C 7	7300 A 3	M304 C 3	M608 D 8	
2104 B 6	2202 F 7	2300 B 2	2324 A 4	2422 E 4	2601 E 7	3106 B 6	3207 D 9	3310 A 3	3412 F 3	3510 D 1	3618 E 5	4105 B 4	5601 E 7	7400 F 4	M305 A 2	M609 E 6	
2105 B 8	2203 F 7	2301 A 2	2325 B 4	2423 E 3	2602 B 8	3107 B 9	3210 F 6	3312 B 2	3413 E 5	3511 E 1	3619 B 1	4201 E 4	5602 B 7	7500 E 1	M401 E 3	M610 D 6	
2106 B 8	2204 E 5	2302 B 4	2400 F 3	2424 F 4	2603 D 3	3110 A 5	3212 F 5	3313 B 4	3415 F 5	3512 E 1	3620 C 2	4202 E 5	6600 C 2	7600 B 2	M402 E 4	M611 D 6	
2107 B 6	2205 F 8	2303 B 4	2401 E 4	2425 F 5	2604 C 2	3112 B 5	3213 F 7	3315 A 4	3416 E 3	3513 E 1	3621 C 2	4203 E 6	6601 B 4	7602 D 2	M403 E 2	M612 D 6	
2108 C 5	2206 F 8	2304 B 4	2402 E 4	2500 E 1	2605 B 8	3113 A 7	3215 F 7	3316 A 2	3417 F 3	3600 C 3	3622 A 1	4204 E 6	6602 C 3	7603 D 3	M404 F 3	M613 D 6	
2109 A 6	2207 F 5	2305 C 8	2403 F 5	2501 E 2	2606 E 8	3115 A 6	3216 E 6	3317 A 3	3418 E 3	3601 B 2	3623 B 1	4205 E 6	6603 C 2	7604 D 2	M405 E 3	M614 D 5	



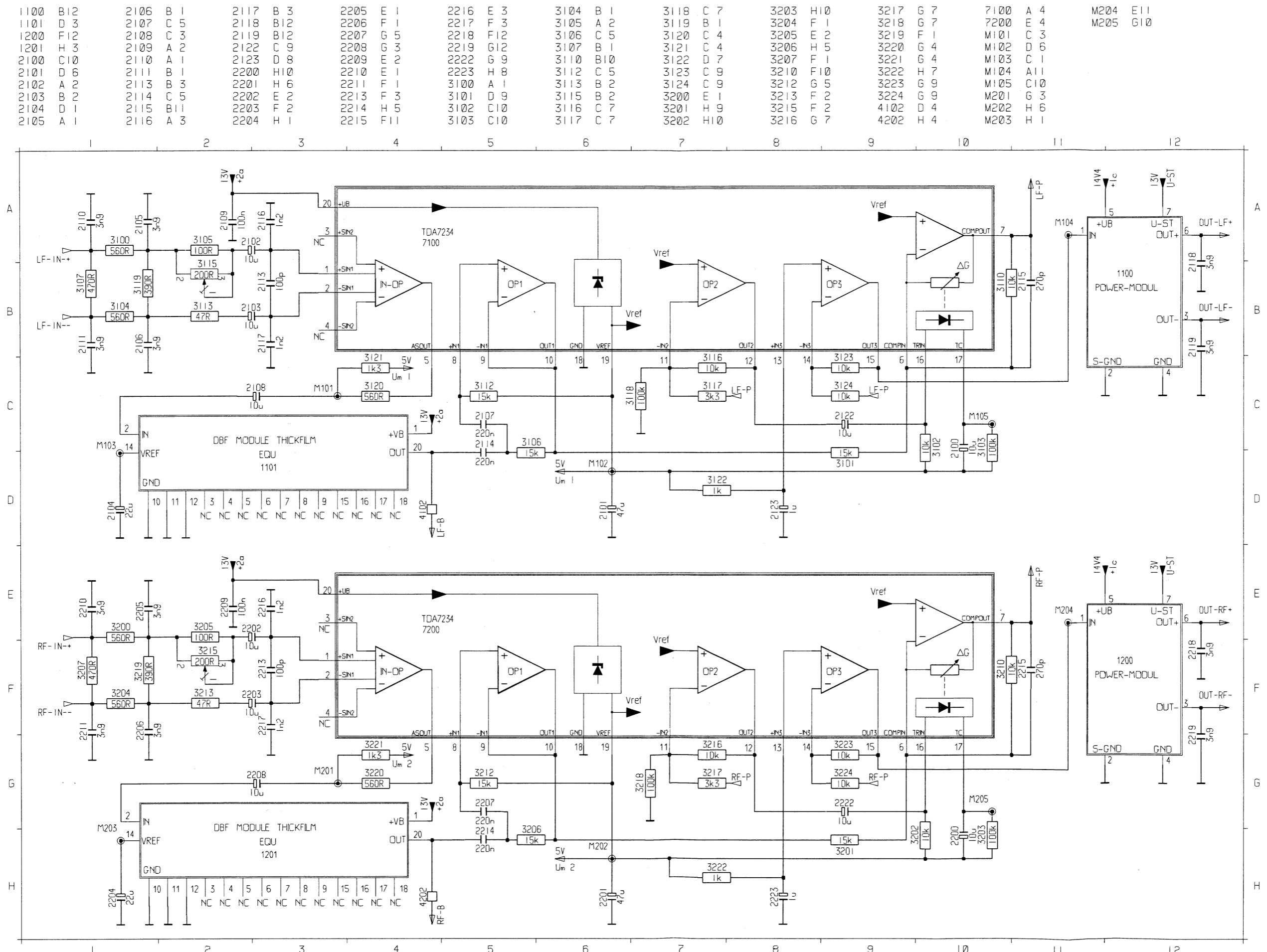
## **CONNECTOR BLOCK / POWER SUPPLY**



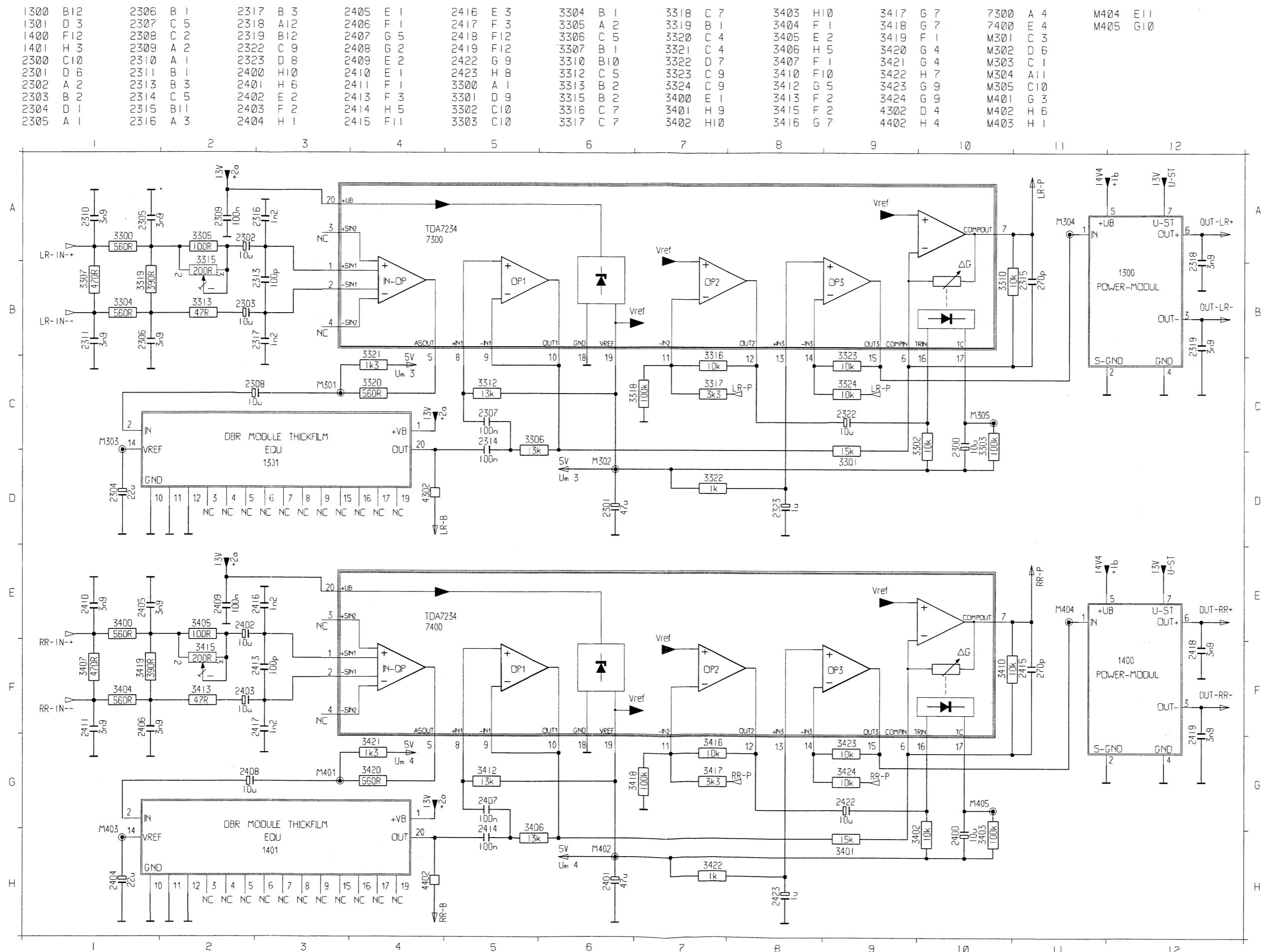
## POWER MODUL



## FRONT AMPLIFIER

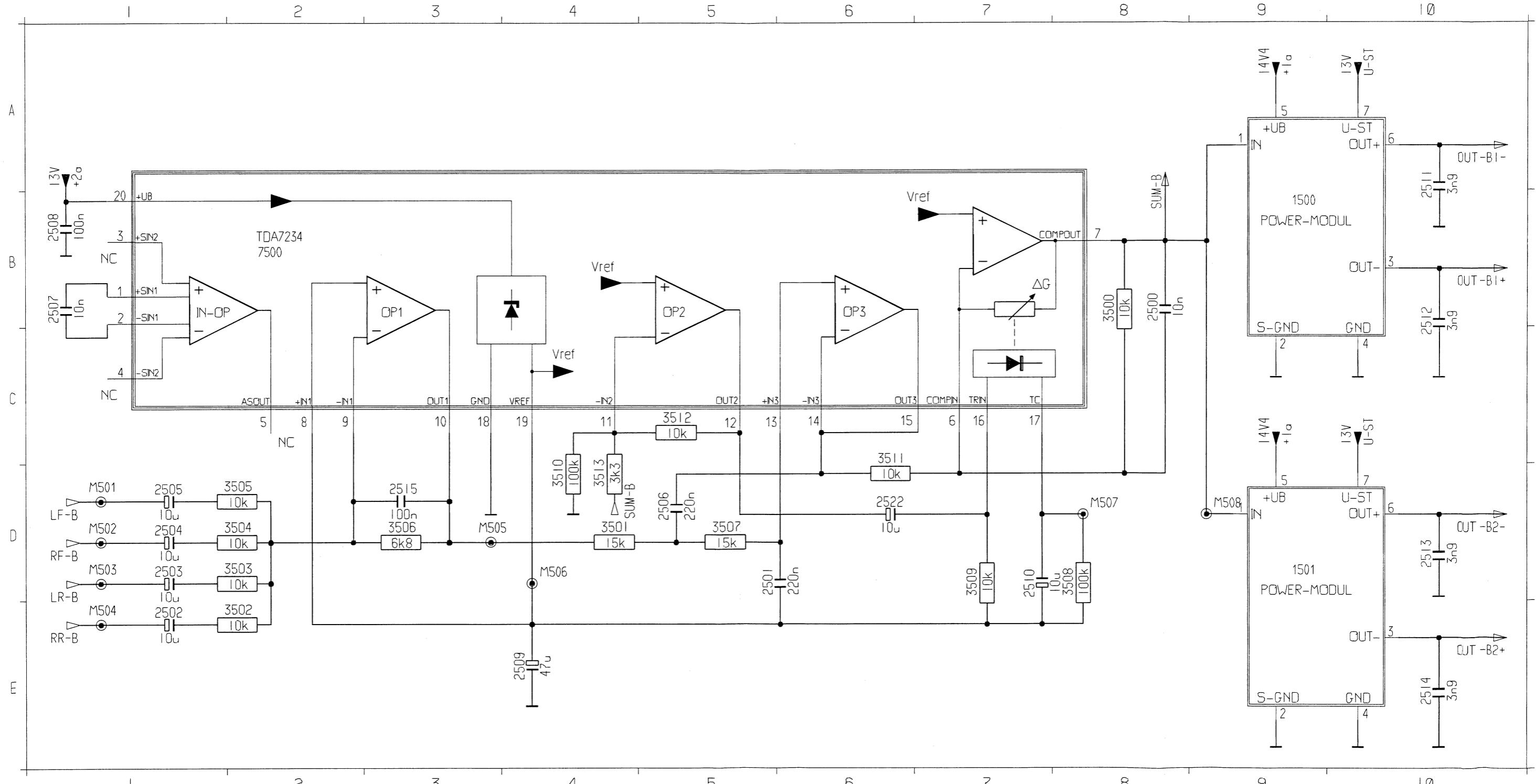


## REAR AMPLIFIER

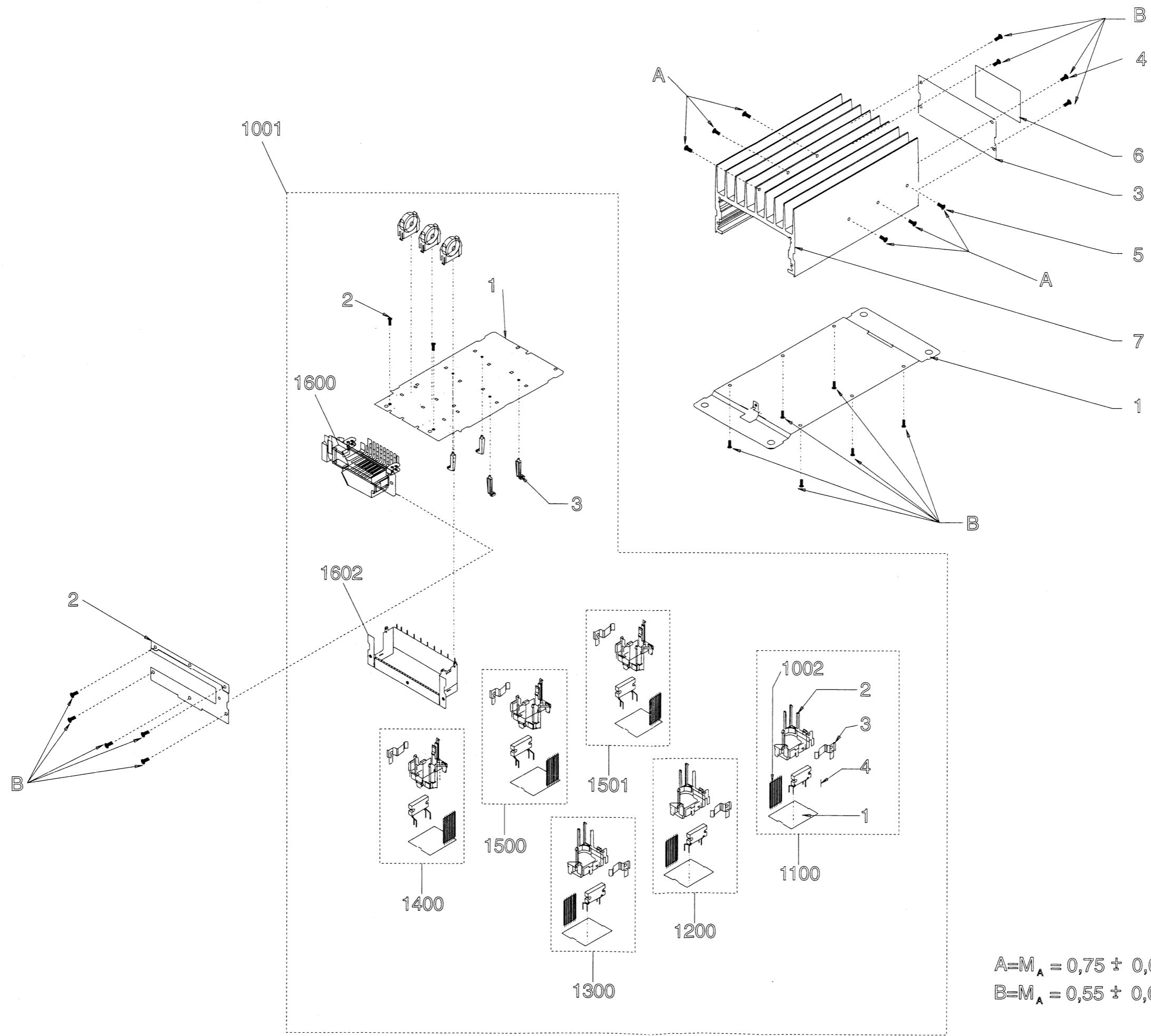


## **BASS AMPLIFIER**

1500	B	9	2503	D	1	2508	B	1	2513	D	0	3501	D	4	3506	D	3	3511	C	6	M502	D	1	M507	D	8
1501	D	9	2504	D	1	2509	E	4	2514	E	0	3502	E	2	3507	D	5	3512	C	5	M503	D	1	M508	D	9
2500	B	8	2505	D	1	2510	D	7	2515	D	3	3503	D	2	3508	D	8	3513	D	4	M504	E	1			
2501	D	5	2506	D	5	2511	A	0	2522	D	6	3504	D	2	3509	D	7	7500	B	2	M505	D	3			
2502	E	1	2507	B	1	2512	B	0	3500	B	8	3505	D	2	3510	D	4	M501	D	1	M506	D	4			



EXPLODED VIEW



## PARTSLIST

For all capacitors, resistors and coils not mentioned here, refer to standard component catalogue.  
Service code is 4822 736 53404.

<u>Miscellaneous</u>	4822 252 51113	FUSE 15A		
1101, 1201	4822 214 52311	THICKFILM UNIT	FRONT	
1301, 1401	4822 214 52309	THICKFILM UNIT	REAR	
<u>Capacitors</u>				
2100	4822 124 80813	CAP.ELECTROLYT.	10UF20%	16V
2101	4822 124 80724	CAP.ELECTROLYT.	47UF20%	10V
2102, 2103, 2108	4822 124 80813	CAP.ELECTROLYT.	10UF20%	16V
2122	4822 124 80813	CAP.ELECTROLYT.	10UF20%	16V
2123	4822 124 80725	CAP.ELECTROLYT.	1UF20%	50V
2200	4822 124 80813	CAP.ELECTROLYT.	10UF20%	16V
2201	4822 124 80724	CAP.ELECTROLYT.	47UF20%	10V
2202, 2203, 2208	4822 124 80813	CAP.ELECTROLYT.	10UF20%	16V
2222	4822 124 80813	CAP.ELECTROLYT.	10UF20%	16V
2223	4822 124 80725	CAP.ELECTROLYT.	1UF20%	50V
2300	4822 124 80813	CAP.ELECTROLYT.	10UF20%	16V
2301	4822 124 80724	CAP.ELECTROLYT.	47UF20%	10V
2302, 2303, 2308	4822 124 80813	CAP.ELECTROLYT.	10UF20%	16V
2322	4822 124 80813	CAP.ELECTROLYT.	10UF20%	16V
2323	4822 124 80725	CAP.ELECTROLYT.	1UF20%	50V
2400	4822 124 80813	CAP.ELECTROLYT.	10UF20%	16V
2401	4822 124 80724	CAP.ELECTROLYT.	47UF20%	10V
2402, 2403, 2408	4822 124 80813	CAP.ELECTROLYT.	10UF20%	16V
2422	4822 124 80813	CAP.ELECTROLYT.	10UF20%	16V
2423	4822 124 80725	CAP.ELECTROLYT.	1UF20%	50V
2502 - 2505	4822 124 80813	CAP.ELECTROLYT.	10UF20%	16V
2509	4822 124 80724	CAP.ELECTROLYT.	47UF20%	10V
2510, 2522	4822 124 80813	CAP.ELECTROLYT.	10UF20%	16V
2600 - 2602	4822 124 80707	CAP.ELECTROLYT.	2200UF20%	25V
2603	4822 124 41097	CAP.ELECTROLYT.	220UF 20%	16V
2604	4822 124 81195	CAP.ELECTROLYT.	100UF20%	16V
2613	4822 124 80813	CAP.ELECTROLYT.	10UF20%	16V
2616	4822 124 80725	CAP.ELECTROLYT.	1UF20%	50V
2617	4822 124 80813	CAP.ELECTROLYT.	10UF20%	16V
2618	4822 124 80766	CAP.ELECTROLYT.	1000UF20%	25V
2701, 2703, 2705	4822 122 32916	CAP.CHIP	220NF10%X7R	63V
2706, 2708	4822 124 80769	CAP.ELECTROLYT.	2200UF20%	16V
2711, 2712	4822 122 32916	CAP.CHIP	220NF10%X7R	63V
2713	4822 124 80766	CAP.ELECTROLYT.	1000UF20%	25V
2717, 2718	4822 122 32916	CAP.CHIP	220NF10%X7R	63V
<u>Resistors</u>				
3115, 3215	5322 100 11588	POTM.TRIMMER	220R 30%lin	0,1W
3315, 3415	5322 100 11588	POTM.TRIMMER	220R 30%lin	0,1W
<u>Coils</u>				
5600 - 5602	4822 157 70935	COIL FILTER ASSY		
<u>Diodes</u>				
6600, 6601	4822 130 30621	DIODE	1N4148	
6602	4822 130 31545	RECTIFIER	1N4003GP	
6603	4822 130 34173	DIODE	BZX79-C5V6	
6604	4822 130 34281	DIODE	BZX79-C15	
6605, 6606	4822 130 30621	DIODE	1N4148	
6607 - 6609	4822 130 82465	DIODE	1.5KE27P	
6610 - 6614, 6616	4822 130 30621	DIODE	1N4148	
<u>Transistors and IC's</u>				
7100 - 7500	4822 209 91139	INTEGR.CIRCUIT	TDA7234	
7600	4822 209 91034	INTEGR.CIRCUIT	LM2901D	
7602	4822 130 42705	TRANSISTOR,CHIP	BC847	
7603	4822 130 40823	TRANSISTOR	BD137	
7604, 7605	4822 130 61233	TRANSISTOR,CHIP	BC857	
7606	4822 130 42615	TRANSISTOR,CHIP	BC817-40	
7701	4822 209 91035	INTEGR.CIRCUIT	TDA1560Q/N4	